



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department of Community Health



Jennifer M. Granholm, Governor
Janet Olszewski, Director

Editor: Susan Vagasky, DVM
Surveillance and Infectious Disease Epidemiology
VagaskyS@Michigan.gov

February 7, 2008
Vol. 5; No. 6

New updates in this issue:

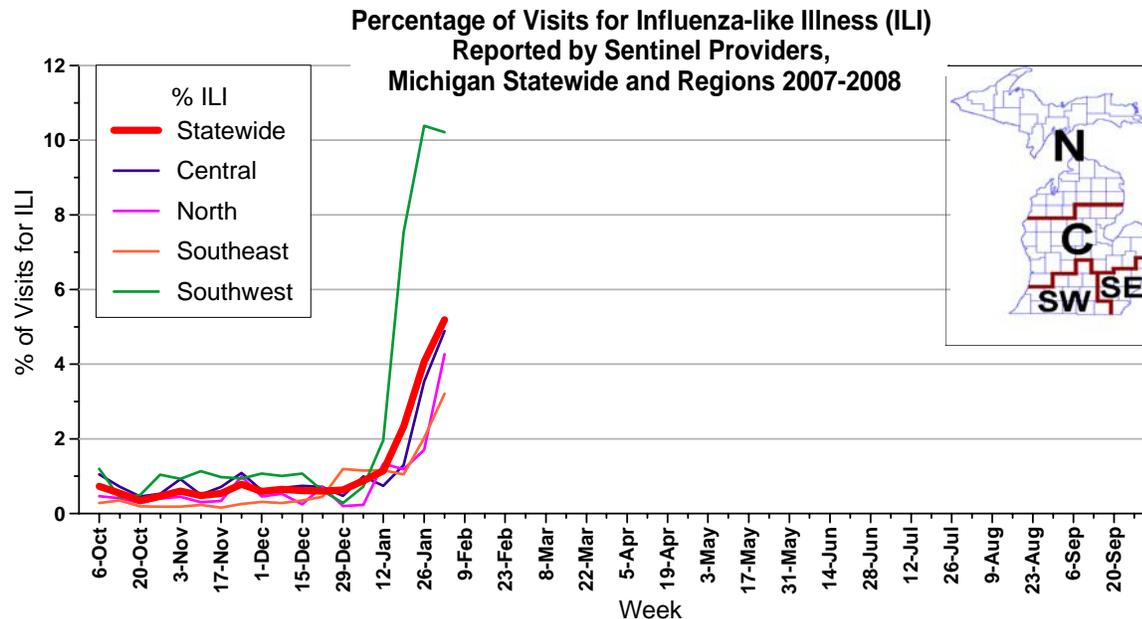
- **Michigan Surveillance:** Multiple surveillance indicators, especially congregate outbreaks, increase.
- **National Surveillance:** Activity continues to increase; 37 states report widespread or regional levels.
- **Avian Influenza:** Indonesia reports 2 new human cases; multiple countries with poultry outbreaks.

Michigan Disease Surveillance System: The week ending February 2 saw aggregate flu-like illness remain near last week's levels while individual flu reports saw a third week of noticeable increases. Aggregate flu-like illness reports are comparable with numbers seen this time last year, while individual influenza reports are considerably higher.

Emergency Department Surveillance: Emergency department visits due to both constitutional and respiratory complaints continued to increase this past week. Both respiratory and constitutional complaints are slightly higher than numbers that were seen this time last year. Nineteen constitutional alerts in the C(6), N(4), SE(3) and SW(5) Influenza Surveillance Regions including 1 Statewide alert and three respiratory alerts in the N(1) and SW(2) Influenza Surveillance Regions were generated last week.

Over-the-Counter Product Surveillance: Overall, OTC product sales activity held fairly steady this week. Unpromoted children's electrolytes sales, however, saw a slight decrease while overall children's electrolytes sales remained near last week's levels. The indicators levels are comparable to those seen at this time last year.

Sentinel Surveillance (as of February 7): The proportion of visits due to influenza-like illness (ILI) in Michigan has continued to increase, and is at 5.2% for the week ending Feb. 2. This represents 497 cases of ILI out of 9573 total patient visits; 37 sentinels provided data for this report. The high level (10.2%) in the Southwest region is principally due to one large practice in Kalamazoo which reported 22% ILI (129/436) last week; this was 25% (123/497) of the ILI cases reported statewide. However, many other sentinels throughout the state are also reporting increased activity. The proportion of visits due to ILI increased to 4.9% in the Central region, to 4.3% in the North region, and to 3.2% in the Southeast region. Note that these rates may change as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of February 7): For the 2007-2008 influenza season, the MDCH Bureau of Laboratories has identified 120 influenza isolates:

- 100 A/H3N2: Southeast (37); Central (30); Southwest (19); North (14)
- 3 A/H1N1: Southeast (2); North (1)
- 5 A subtype pending: Southeast (2); Southwest (1); North (2)
- 12 B: Southeast (9); North (2); Central (1). 8 have been typed as B/Shanghai/361/2002-like.

All sentinel laboratories continue to report high numbers of positive influenza A tests and low influenza B positives, with individual labs in the Southwest and Central regions are reporting a noticeable increase in influenza A positives for the past week. The number of RSV positive tests continues to increase statewide; sporadic adenoviruses have also been reported.

***As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

Influenza-Associated Pediatric Mortality (as of February 7): For the 2007-2008 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan.

A death due to influenza A and sepsis in a 25 year old from the Southwest region was reported this week to MDCH. A rapid test was positive for influenza A and culture confirmation will be attempted at MDCH BOL. Unfortunately, confirmation of a possible bacterial co-infection will not be possible.

***The CDC has asked all states to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child (<18 years) resulting from a compatible illness confirmed to be influenza by an appropriate diagnostic test, but also any unexplained death with evidence of an infectious process in a child. See www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. Please immediately call MDCH to ensure that proper clinical specimens are obtained.

Congregate Settings Outbreaks (as of February 7): One culture-confirmed influenza outbreak and 10 additional respiratory outbreaks have been reported to MDCH for the 2007-2008 influenza season.

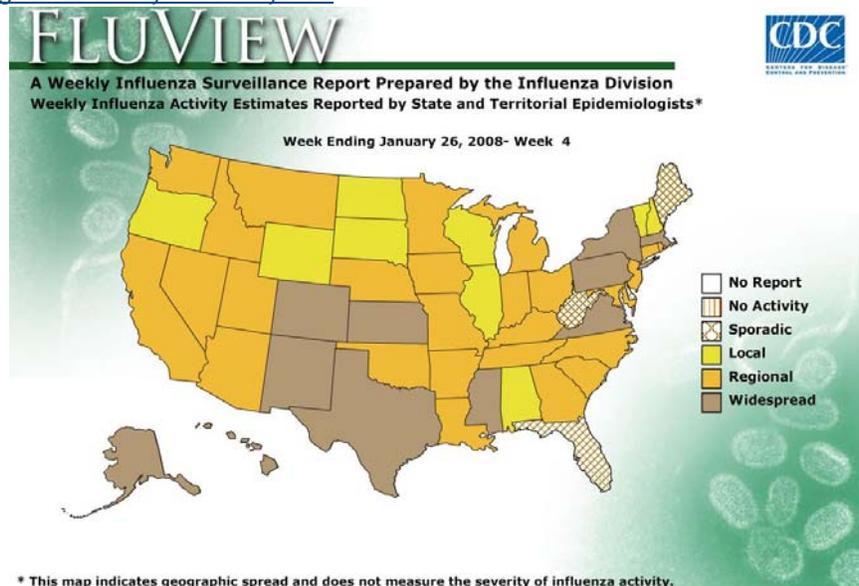
- Southeast: 1 report
 - A long-term care facility outbreak was confirmed by MDCH BOL to be influenza A H3N2.
- Central: 5 reports
 - A K-12 school was closed due to high numbers of students and staff with high fevers and respiratory symptoms; respiratory viral cultures are underway at the MDCH BOL.
 - Two nursing homes have had both residents and staff ill with ILI; rapid tests at both facilities were positive for influenza A and confirmation is underway at MDCH BOL.
 - An assisted living facility had residents with ILI; rapid tests were positive for influenza A.
 - A teenage school co-op program reported students with ILI; no testing was available.
- Southwest: 5 reports
 - 4 nursing homes have reported varying degrees of ILI in their residents and staff; all facilities had residents with positive rapid tests for influenza A; cultures are underway.
 - A small college reported large numbers of students with ILI; the outbreak subsided before testing could be conducted.

National (CDC [edited], February 1): During week 4 (January 20 - 26, 2008), influenza activity continued to increase in the United States. Six hundred seventy-seven (16.8%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories were positive for influenza. The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold. The proportion of outpatient visits for influenza-like illness (ILI) was above national baseline levels, and the proportion of outpatient visits for acute respiratory illness (ARI) was below national baseline levels. ILI increased in all nine regions compared to week 3, and the East North Central, East South Central, Mountain, New England, Pacific, South Atlantic, West North Central, and West South Central regions reported ILI above their region-specific baselines. Eleven states reported widespread influenza activity; 26 states reported regional

influenza activity; nine states and the District of Columbia reported local influenza activity; and four states and Puerto Rico reported sporadic influenza activity.

Since September 30, 2007, WHO and NREVSS laboratories have tested a total of 71,887 specimens for influenza viruses and 4,327 (6.0%) were positive. Among the 4,327 influenza viruses, 3,701 (85.5%) were influenza A viruses and 626 (14.5%) were influenza B viruses. One thousand one (27.0%) of the 3,701 influenza A viruses have been subtyped: 654 (65.3%) were influenza A (H1) viruses and 347 (34.7%) were influenza A (H3) viruses.

To access the entire CDC weekly surveillance report throughout the influenza season, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>



International (WHO, January 28): During weeks 2–3, the level of overall influenza activity in the world increased slightly. An increase in both influenza activity and the number of influenza viruses detected was observed in most countries of northern European and North America, where mostly influenza A (H1N1) virus circulated.

The entire report can be found online at <http://www.who.int/csr/disease/influenza/update/en/>

MDCH reported **REGIONAL ACTIVITY** to the CDC for the week ending February 2, 2008.

For stakeholders interested in additional information regarding influenza vaccination and education, the MDCH publication *Michigan FluBytes* is available online at http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html. *FluBytes* is published weekly during the influenza season.

End of Seasonal Report

Avian Influenza Activity

WHO Pandemic Phase: Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

International, Human (WHO, February 1): The Ministry of Health of Indonesia has announced the death of a previously confirmed case of H5N1 infection. The 31-year-old female from East Jakarta, Jakarta Province died on 31 January. Of the 124 cases confirmed to date in Indonesia, 102 have been fatal.

International, Human (WHO, February 5): The Ministry of Health of Indonesia has announced two new cases of human H5N1 avian influenza infection. The first is a 29-year-old female from Tangerang City, Banten Province who developed symptoms on 22 January, was hospitalized on 28 January and died on 2 February. Investigations into the source of her infection are ongoing.

The second case is a 38-year-old female from West Jakarta, Jakarta Province who developed symptoms on 24 January 2008, was hospitalized on 26 January and is currently in hospital in a critical condition. Investigations into the source of her infection are ongoing.

Of the 126 cases confirmed to date in Indonesia, 103 have been fatal.

International, Poultry (The Associated Press [edited], February 1): Livestock officials slaughtered more than 27,000 chickens and ducks in northern Bangladesh after bird flu was confirmed at a poultry farm near the border with India, a report said Friday.

Officials in India's West Bengal state, which borders Bangladesh, have been struggling to contain that country's worst-ever outbreak of the virulent H5N1 bird flu virus.

In Bangladesh, several hundred chickens died at the poultry farm in Dinajpur district, 170 miles north of Dhaka, and laboratory tests confirmed that the H5N1 virus was responsible, the United News of Bangladesh news agency reported.

Local livestock official Sydur Rahman said more than 27,000 chickens and ducks were killed and more than 60,000 eggs were destroyed on Thursday and Friday in an attempt to halt the spread of the virus, the agency said.

Local officials were not immediately available for comment Friday. On Thursday, the government warned the Department of Livestock that more precautions were needed to prevent the disease from spreading.

Bird flu has been confirmed in at least 30 of Bangladesh's 64 districts and has struck more than 97 farms since it was first detected in February last year. More than 350,000 birds have been slaughtered, according to the Ministry of Fisheries and Livestock. No cases of human infection have been reported.

Bangladesh recently tightened controls along its porous border with India, with authorities ordering officials to block all imports of poultry and eggs from that country.

In India, more than 129,000 poultry have died from bird flu in West Bengal state in recent weeks and nearly 2.5 million at-risk birds have been slaughtered, according to Anisur Rahaman, the animal resource development minister. Officials fear the disease could reach crowded Calcutta and its 14 million people.

In Hong Kong, several tests on a black-crowned night heron found dead at Ocean Park confirmed the H5N1 diagnosis, the Agriculture, Fisheries and Conservation Department said in a statement. The government has closed the park's walk-in aviaries _ a 17,000 square foot canopied area where visitors can walk among the birds _ for three weeks starting Thursday as a precaution.

International, Poultry (Xinhua News Agency, February 1): Bird flu H5N1 virus has been detected in a poultry farm in southern Pakistan's port city of Karachi, News Network International news agency reported on Friday. The virus has been detected in Gadap Town of Karachi city, said the report, adding that at least 5,000 chickens have been killed and buried on Friday in view of the outbreak.

NNI quoted Director of Sindh Poultry Research Dr Ali Akbar as saying that preventive measures were necessary to check the spread of the virus. He said the affected poultry farm was being sprayed and the poultry workers had been directed to wear hand gloves during their duties at farms.

Pakistan Poultry Association has demanded the government to vaccinate meat providing birds in the country.

International, Poultry (Xinhua News Agency, February 4): Livestock workers Monday culled more than 1,500 chickens, ducks and pigeons in Bangladesh's southwestern district of Jhenaidah, about 130 km southwest of Dhaka, as bird flu battered the country's poultry industry.

An official at bird flu control room of the livestock ministry told Xinhua Monday that some 1,507 fowls were culled at Pativila village in Maheshpur sub-district of Jhenaidah district after report of 222 chicken died from the virus. With this new culling, some 428,953 fowls were destroyed in the country's 34 districts since March last year.

Already many private poultry farms were shut down. Panicked people stopped buying chickens, bringing down the prices of chickens in local markets. Meanwhile, the government has decided to raise the amount of compensation for the country's affected poultry farm owners.

Special Assistant to the Chief Adviser Manik Lal Samaddar who is in charge of Fisheries and Livestock Ministry poultry asked farm owners not to remove poultry birds from the affected farms without informing the local administration, as the government will provide compensation to the affected poultry farm owners soon.

He ordered district administrations and farm owners to spray germicides to poultry birds carrying vehicles at every entry points to make those free from germs.

International, Poultry (Reuters [edited], February 4): Pakistani authorities confirmed on Monday a fresh outbreak of the H5N1 strain of bird flu at a poultry farm on the outskirts of Karachi, the second case in four days in the country's biggest city, a government official said.

Authorities have found several outbreaks of the virus in poultry and birds in North West Frontier Province and the capital, Islamabad, since it was first detected in the country in early 2006. The first human case, which resulted in a death, was confirmed in December.

The new outbreak was found on a farm only 300 meters (yards) from where an outbreak was detected last week. "Samples taken from it were tested and found positive for H5N1," said Food and Agriculture Ministry official Rafiq-ul-Hassan Usmani. "Some 500 to 600 birds died of the virus and the remaining 5,500 chickens at the farm are being culled now."

Tests were also being done on samples taken from poultry farms in Punjab province but no outbreak had been confirmed, a government spokesman said.

In December, the World Health Organisation said it had established a single case of human infection of bird flu in a sick family in North West Frontier Province, but there was no apparent risk of its spreading further. The man died.

International, Poultry (AHN [edited], February 4): Turkey's Ministry of Agriculture announced Sunday that it detected the deadly bird flu virus in the city of Samsun on the coast of Black Sea in northern Turkey. Agriculture officials described the outbreak as "small-scale" and measures have been taken to isolate the area.

Veterinarians slaughtered all poultry, 37 in total, from the coops of eight households in the affected area. Samsun local government had also set up a six-mile protection and observation zone, and disinfection operations started in the area.

Authorities, however, did not say whether the virus was the deadly H5N1 strain which can kill humans. Further tests were underway. Last month, the H5N1 strain of bird flu was detected in a village about 217 miles west of Samsun.

International, Poultry (www.dominicantoday.com, February 4): Dominican authorities killed more than a dozen chickens this week that tested positive for avian flu, a government official said Saturday.

The birds tested positive for H5N2, a strain of avian flu that poses no risk to humans, and were killed Friday in the eastern town of Higuey, where 115 other infected chickens were exterminated in early January. The chickens appeared to have been smuggled into the country aboard a private boat from Puerto Rico, said Luis Rafael Cedeno, agriculture director for the country's eastern region.

Fearing contagion, Officials in neighboring Haiti have imposed a ban on Dominican poultry imports that has inflated food prices and led to shortages. Haiti imports at least 1 million eggs and hundreds of thousands of chickens daily from the Dominican Republic.

In retaliation for the ban, Dominican merchants on Friday announced plans to temporarily suspend business at a border market that caters to Haitians.

International, Poultry (Reuters [edited], February 6): Bird flu has spread to the Bangladesh capital Dhaka and to the port city Chittagong despite efforts by authorities to contain it, livestock officials said on Wednesday.

Table 2. H5N1 Influenza in Humans (Cases up to February 5, 2008)

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2008_02_05/en/index.html Downloaded 2/5/2008)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		2008		Total	
	cases	deaths												
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	0	0	7	7
China	1	1	0	0	8	5	13	8	5	3	0	0	27	17
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	0	0	43	19
Indonesia	0	0	0	0	20	13	55	45	42	37	9	8	126	103
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	3	2
Lao People's Dem. Rep.	0	0	0	0	0	0	0	0	2	2	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	1	1	102	48
Total	4	4	46	32	98	43	115	79	86	59	10	9	359	226